

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/044304 A2

(51) International Patent Classification⁷: **A61K 39/395**

(US). AUKERMAN, Lea [US/US]; Chiron Corporation, P.O. Box 8097, Emeryville, CA 94662-8097 (US).

(21) International Application Number:
PCT/US2004/036954

(74) Agent: **ALEXANDER, Lisa, E.**; Chiron Corporation, Intellectual Property Department, P.O. Box 8097, Emeryville, CA 94662-8097 (US).

(22) International Filing Date:
4 November 2004 (04.11.2004)

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(26) Publication Language: English

Published:

— without international search report and to be republished upon receipt of that report

(30) Priority Data:
60/517,337 4 November 2003 (04.11.2003) US
60/525,579 26 November 2003 (26.11.2003) US
60/565,710 27 April 2004 (27.04.2004) US
60/611,794 21 September 2004 (21.09.2004) US

(71) Applicant (*for all designated States except US*): **CHIRON CORPORATION** [US/US]; 4560 Horton Street, Emeryville, CA 94608-2916 (US).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(72) Inventors; and
(75) Inventors/Applicants (*for US only*): **LONG, Li** [CA/US]; Chiron Corporation, P.O. Box 8097, Emeryville, CA 94662-8097 (US). **LUQMAN, Mohammad** [US/US]; Chiron Corporation, P.O. Box 8097, Emeryville, CA 94662-8097 (US). **YABANNAVAR, Asha** [US/US]; Chiron Corporation, P.O. Box 8097, Emeryville, CA 94662-8097 (US). **ZAROR, Isabel** [US/US]; Chiron Corporation, P.O. Box 8097, Emeryville, CA 94662-8097

WO 2005/044304 A2

(54) Title: USE OF ANTAGONIST ANTI-CD40 ANTIBODIES FOR TREATMENT OF CHRONIC LYMPHOCYTIC LEUKEMIA

(57) Abstract: Methods of therapy for treating a subject for chronic lymphocytic leukemia are provided. The methods comprise administering a therapeutically effective amount of an antagonist anti-CD40 antibody or antigen-binding fragment thereof to a patient in need thereof. The antagonist anti-CD40 antibody or antigen-binding fragment thereof is free of significant agonist activity, but exhibits antagonist activity when the antibody binds a CD40 antigen on a human CD40-expressing cell. Antagonist activity of the anti-CD40 antibody or antigen-binding fragment thereof beneficially inhibits proliferation and/or differentiation of human CD40-expressing chronic lymphocytic leukemia cells.